FIG. 1A
FRONT VIEW

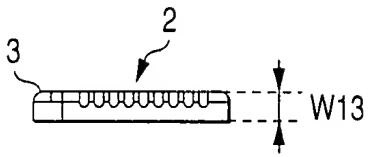


FIG. 1B
SIDE VIEW

FIG. 1C
PLAN VIEW

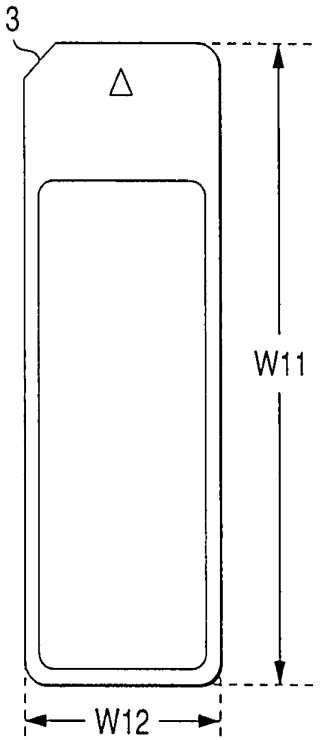


FIG. 1D
BOTTOM VIEW

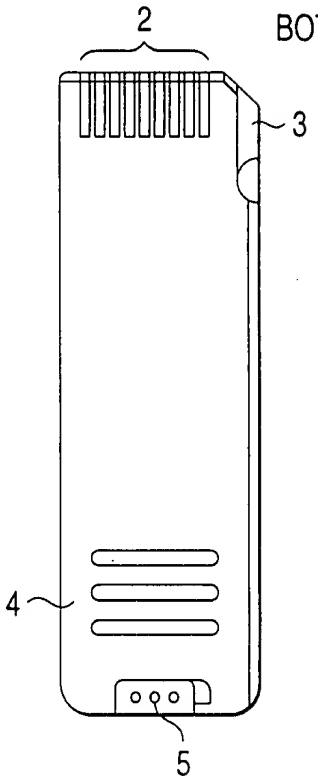


FIG. 2B
TOP VIEW

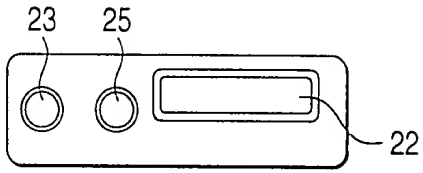


FIG. 2C
LEFT-HAND
SIDE VIEW

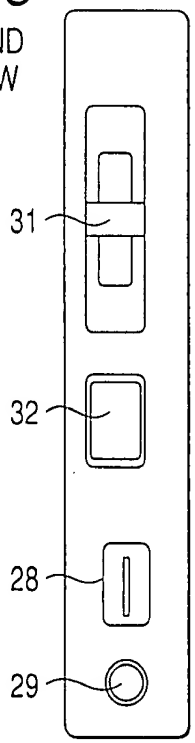


FIG. 2A
PLAN VIEW

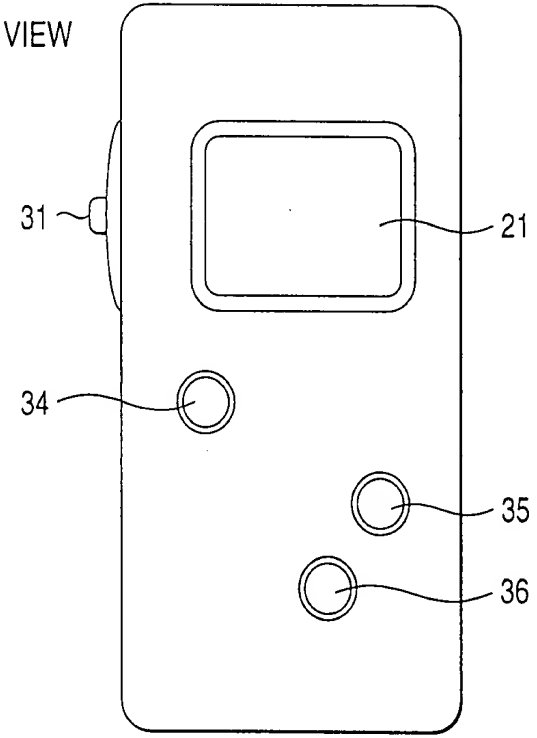


FIG. 2D
RIGHT-HAND
SIDE VIEW

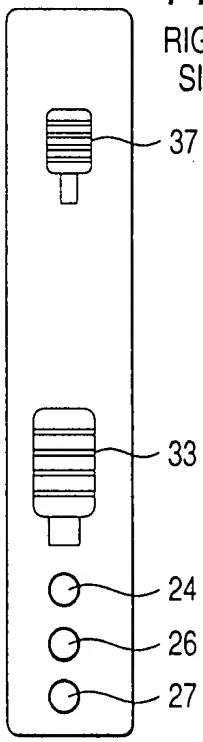


FIG. 2E
BOTTOM VIEW

FIG. 3

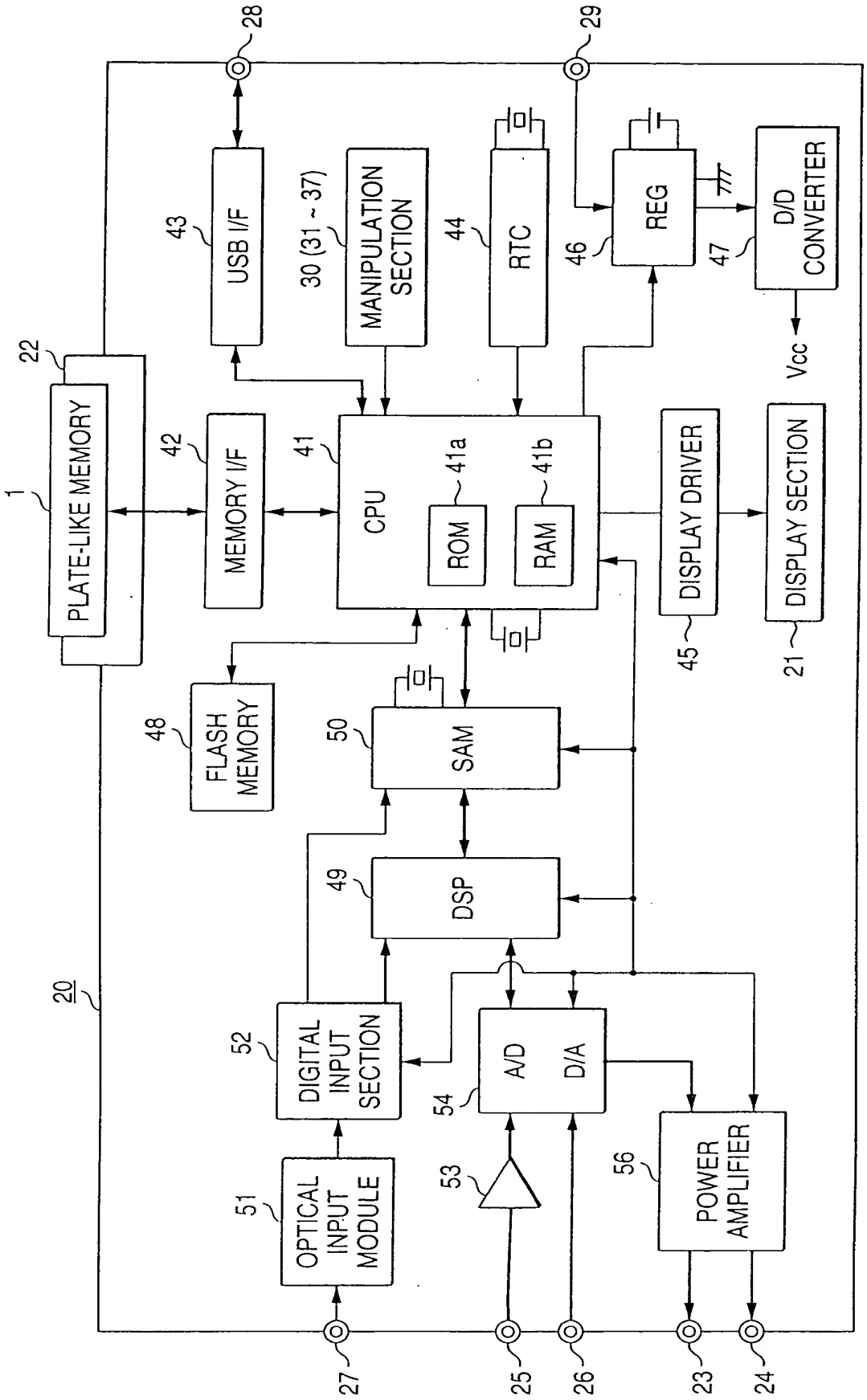

28
29
43
USB I/F
30 (31 ~ 37)
MANIPULATION SECTION
44
RTC
46
REG
47
D/D CONVERTER
Vcc
22
1
PLATE-LIKE MEMORY
42
MEMORY I/F
41
CPU
41a
ROM
41b
RAM
DISPLAY DRIVER
45
DISPLAY SECTION
21
48
FLASH MEMORY
50
SAM
49
DSP
20
52
DIGITAL INPUT SECTION
54
A/D
D/A
53
56
POWER AMPLIFIER
51
OPTICAL INPUT MODULE
27
25
26
23
24

FIG. 4

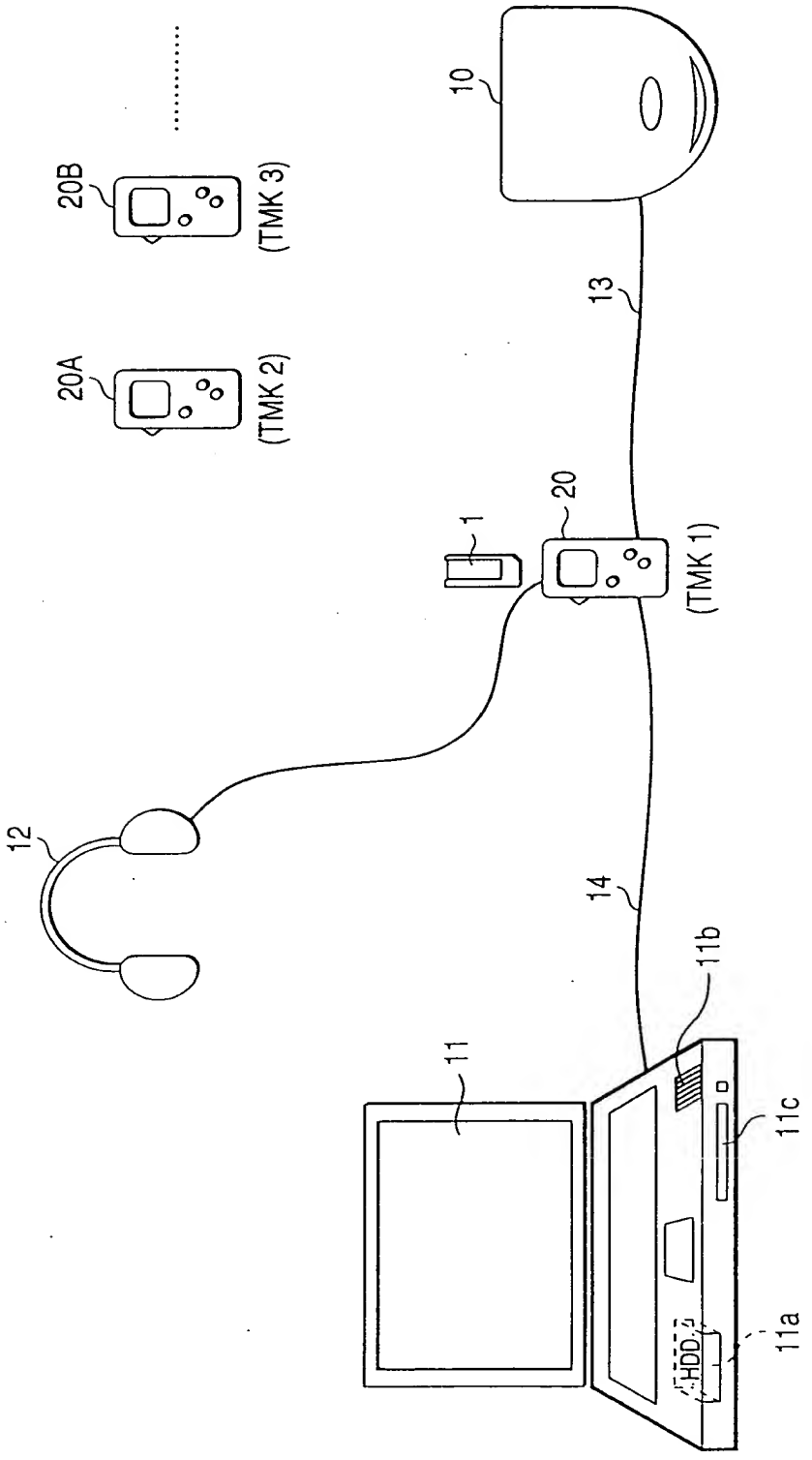


FIG. 5

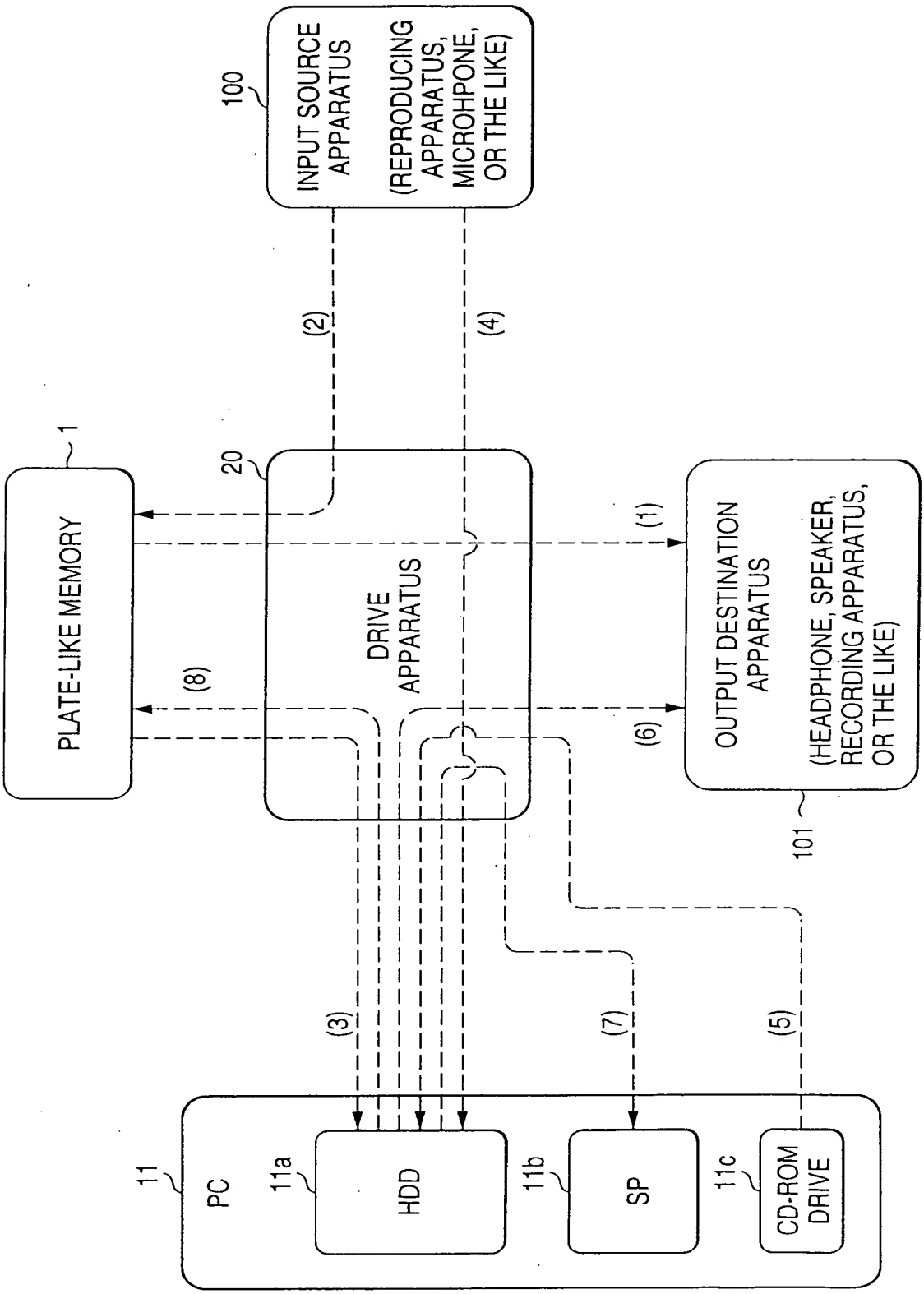

100
INPUT SOURCE APPARATUS
(REPRODUCING APPARATUS, MICROHPONE, OR THE LIKE)
(2)
(4)
1
PLATE-LIKE MEMORY
20
DRIVE APPARATUS
(1)
(8)
(6)
OUTPUT DESTINATION APPARATUS
(HEADPHONE, SPEAKER, RECORDING APPARATUS, OR THE LIKE)
101
(3)
(7)
(5)
11
PC
11a
HDD
11b
SP
11c
CD-ROM DRIVE

FIG. 6

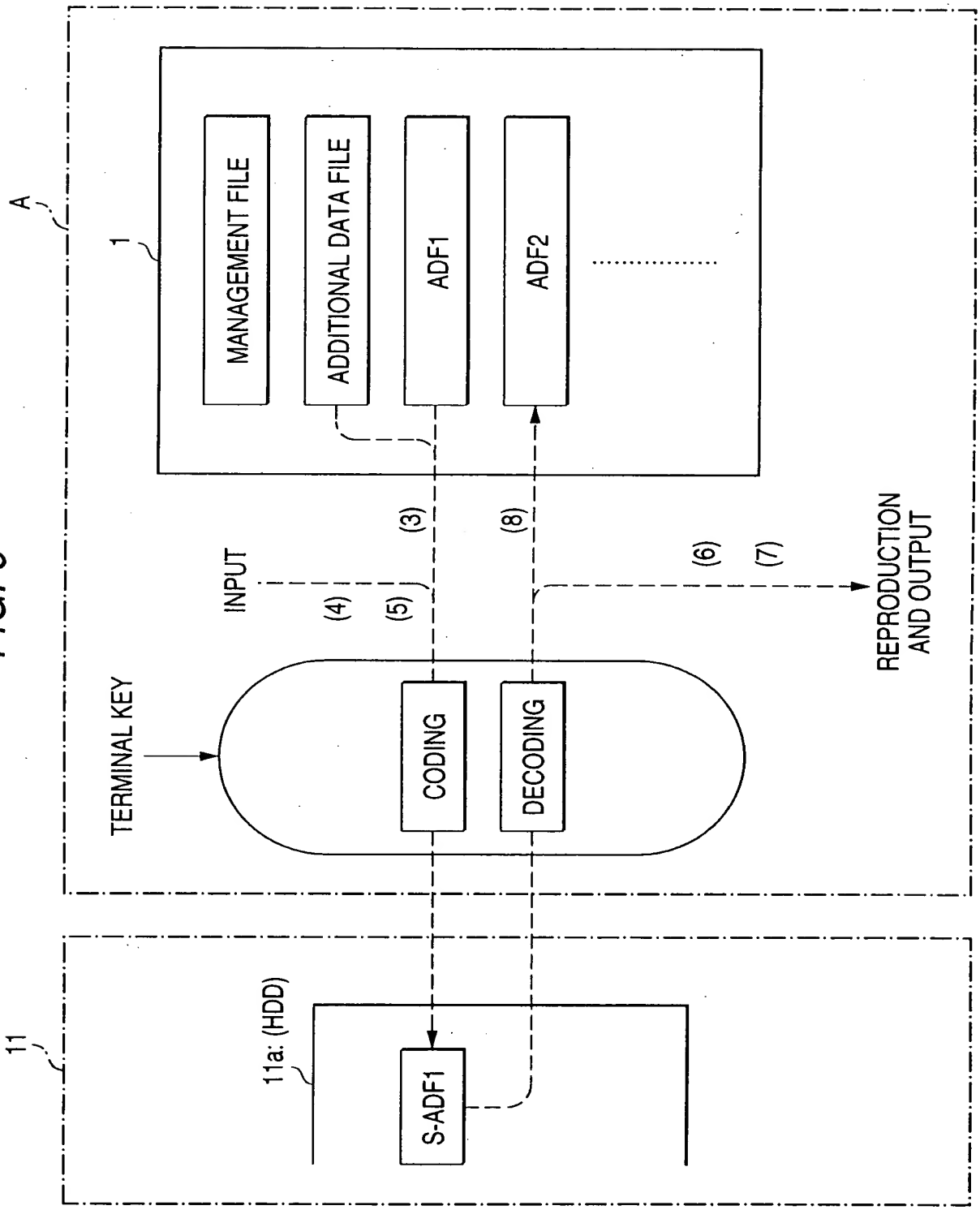

A
1
MANAGEMENT FILE
ADDITIONAL DATA FILE
ADF1
ADF2
INPUT
(3)
(4)
(5)
(6)
(7)
(8)
TERMINAL KEY
CODING
DECODING
REPRODUCTION AND OUTPUT
11
11a: (HDD)
S-ADF1

FIG. 7

OPERATION (3): COPYING OR MOVEMENT FROM PLATE-LIKE MEMORY TO HDD

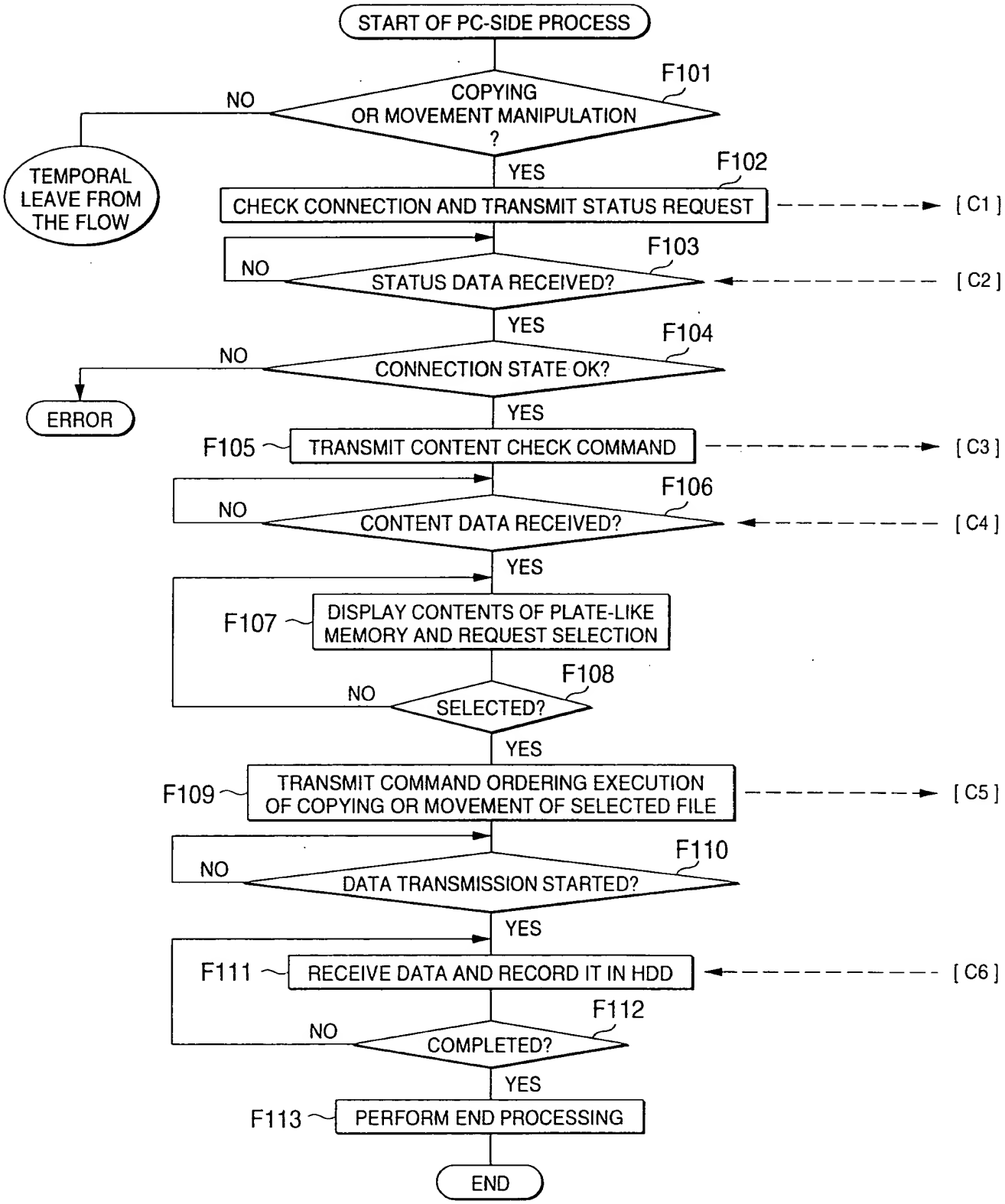


FIG. 8

OPERATION (3): COPYING OR MOVEMENT FROM PLATE-LIKE MEMORY TO HDD

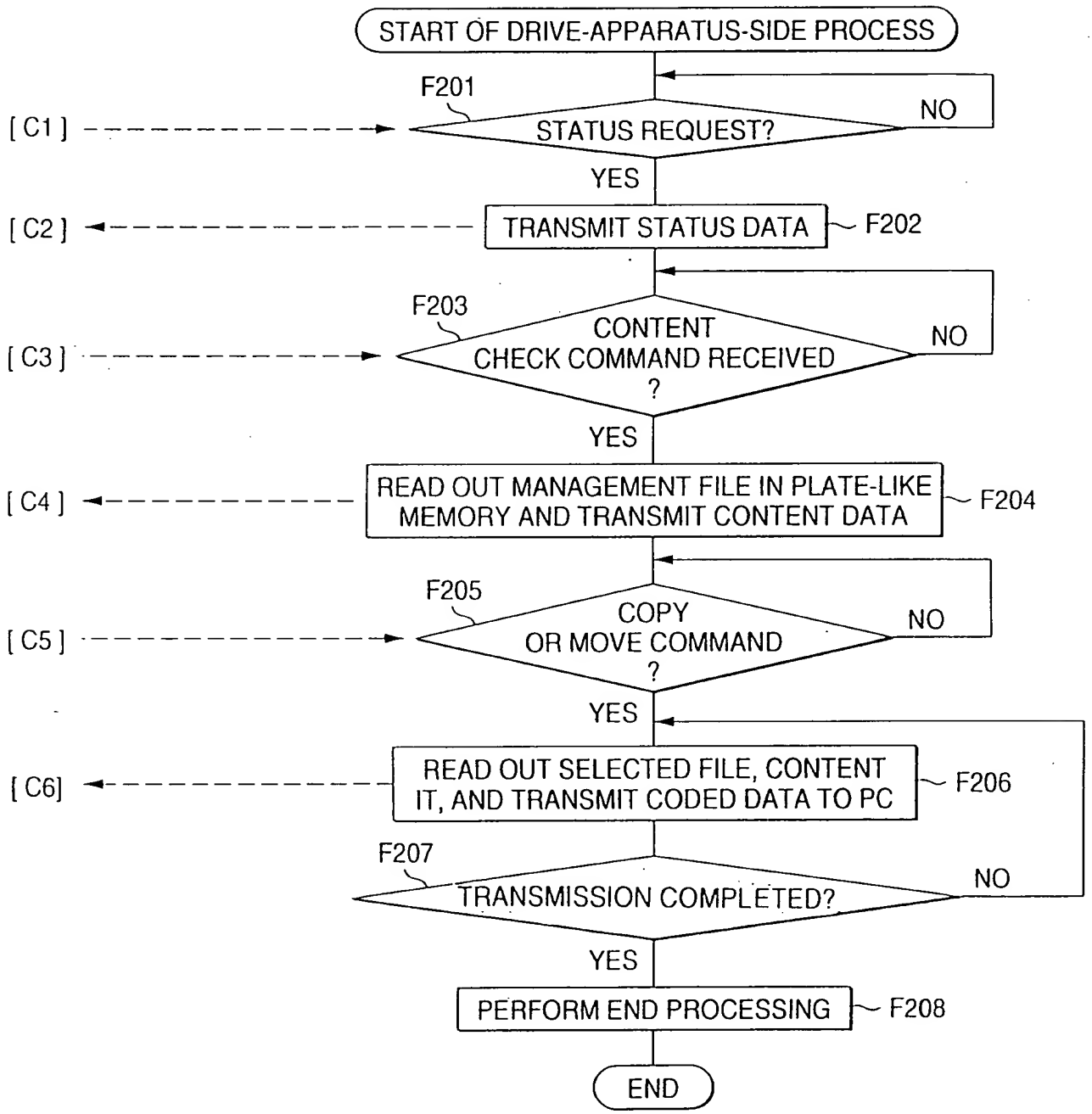


FIG. 9

OPERATION (6): REPRODUCTION FROM HDD (OUTPUT ON DRIVE APPARATUS SIDE)

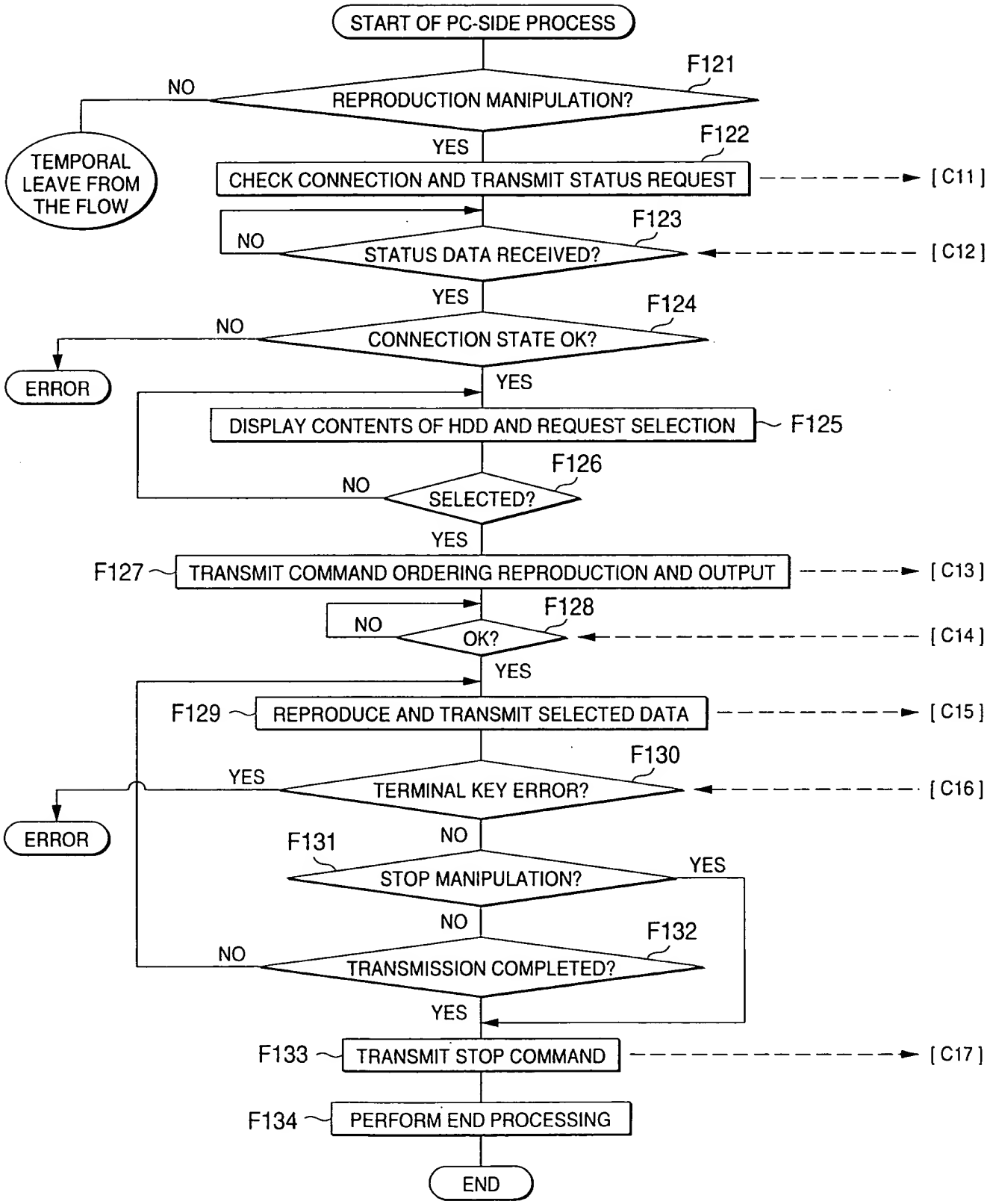


FIG. 10

OPERATION (6): REPRODUCTION FROM HDD (OUTPUT ON DRIVE APPARATUS SIDE)

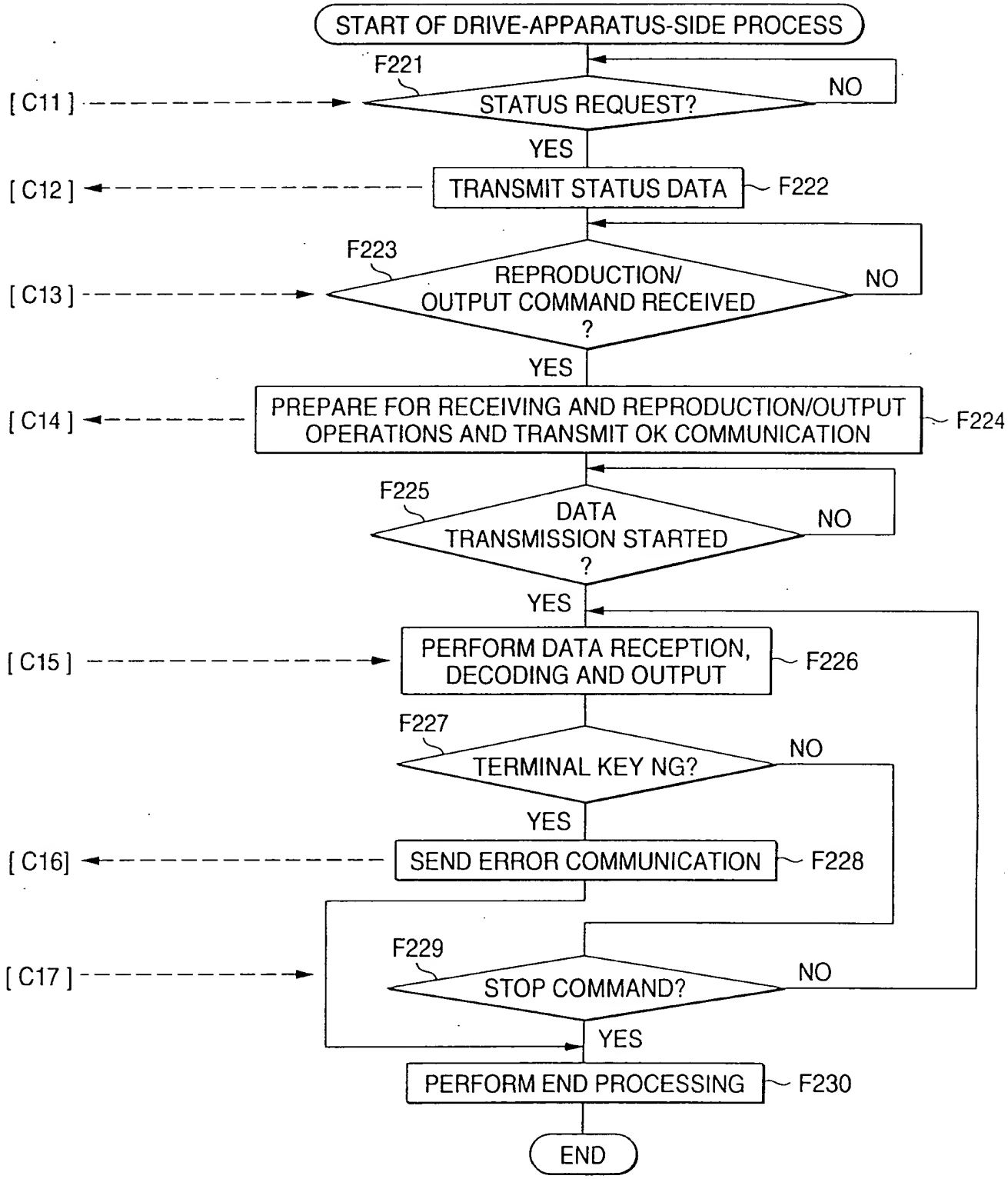


FIG. 11

OPERATION (8): COPYING OR MOVEMENT FROM HDD TO PLATE-LIKE MEMORY

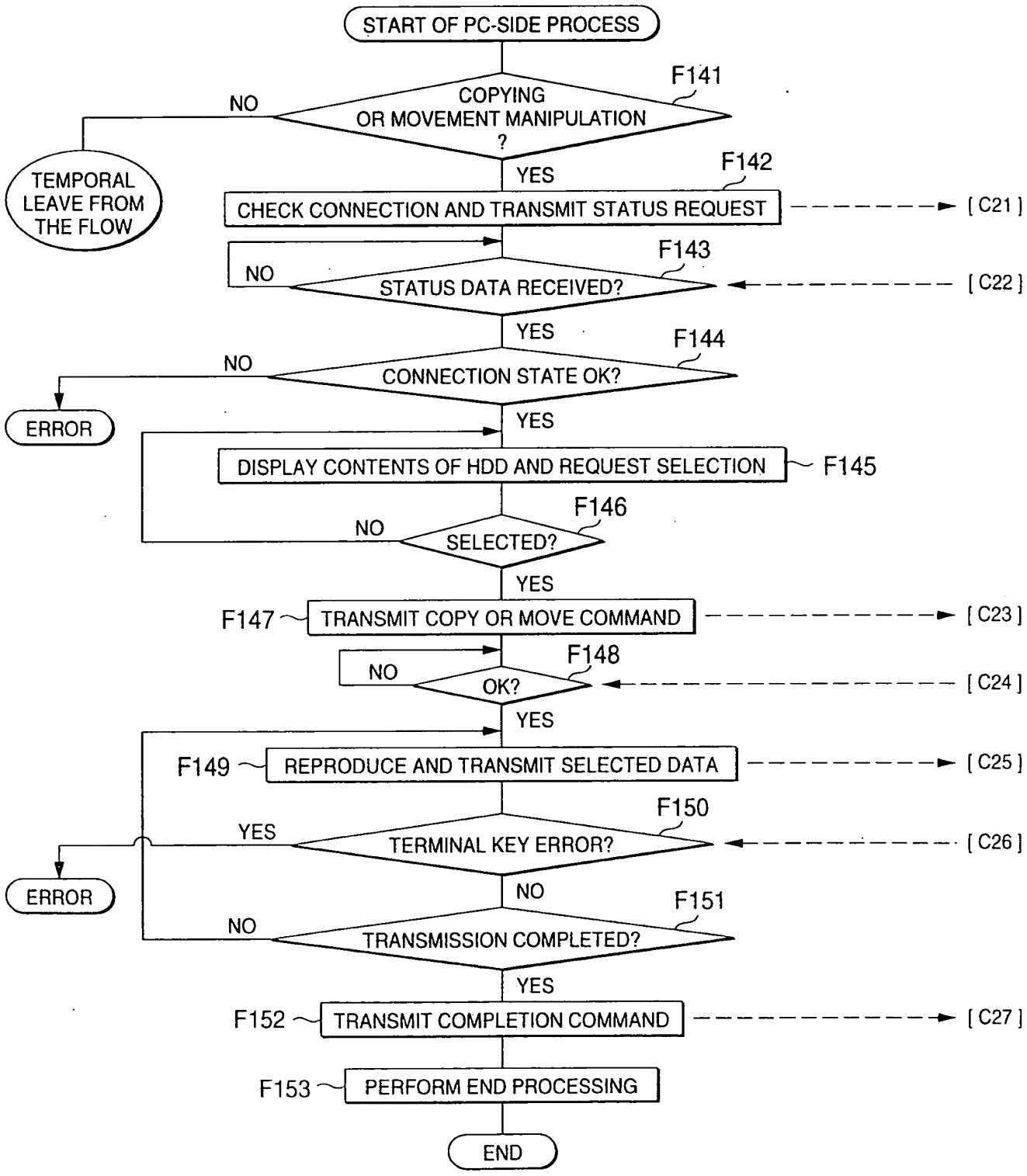


FIG. 12

OPERATION (8): COPYING OR MOVEMENT FROM HDD TO PLATE-LIKE MEMORY

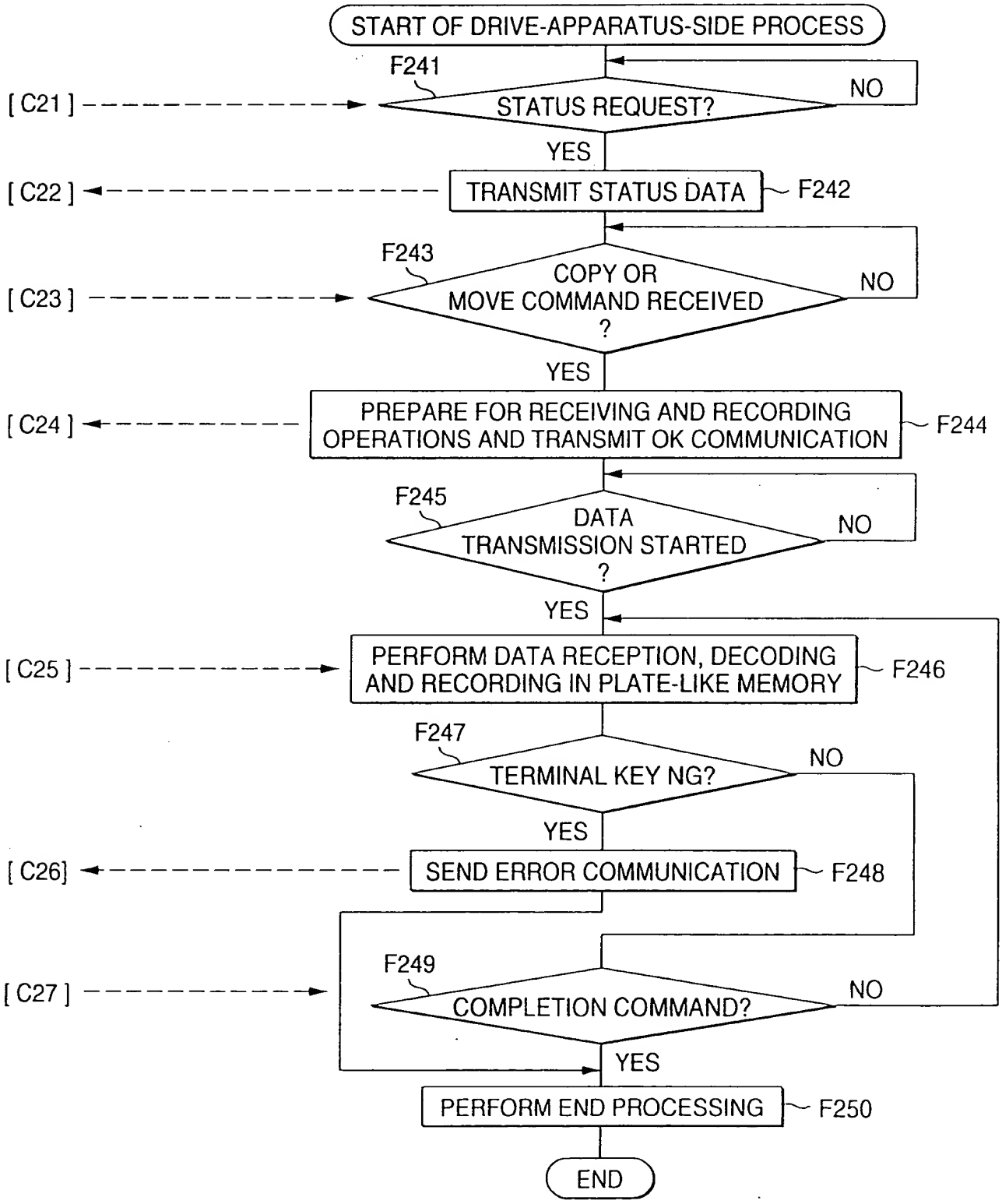


FIG. 13

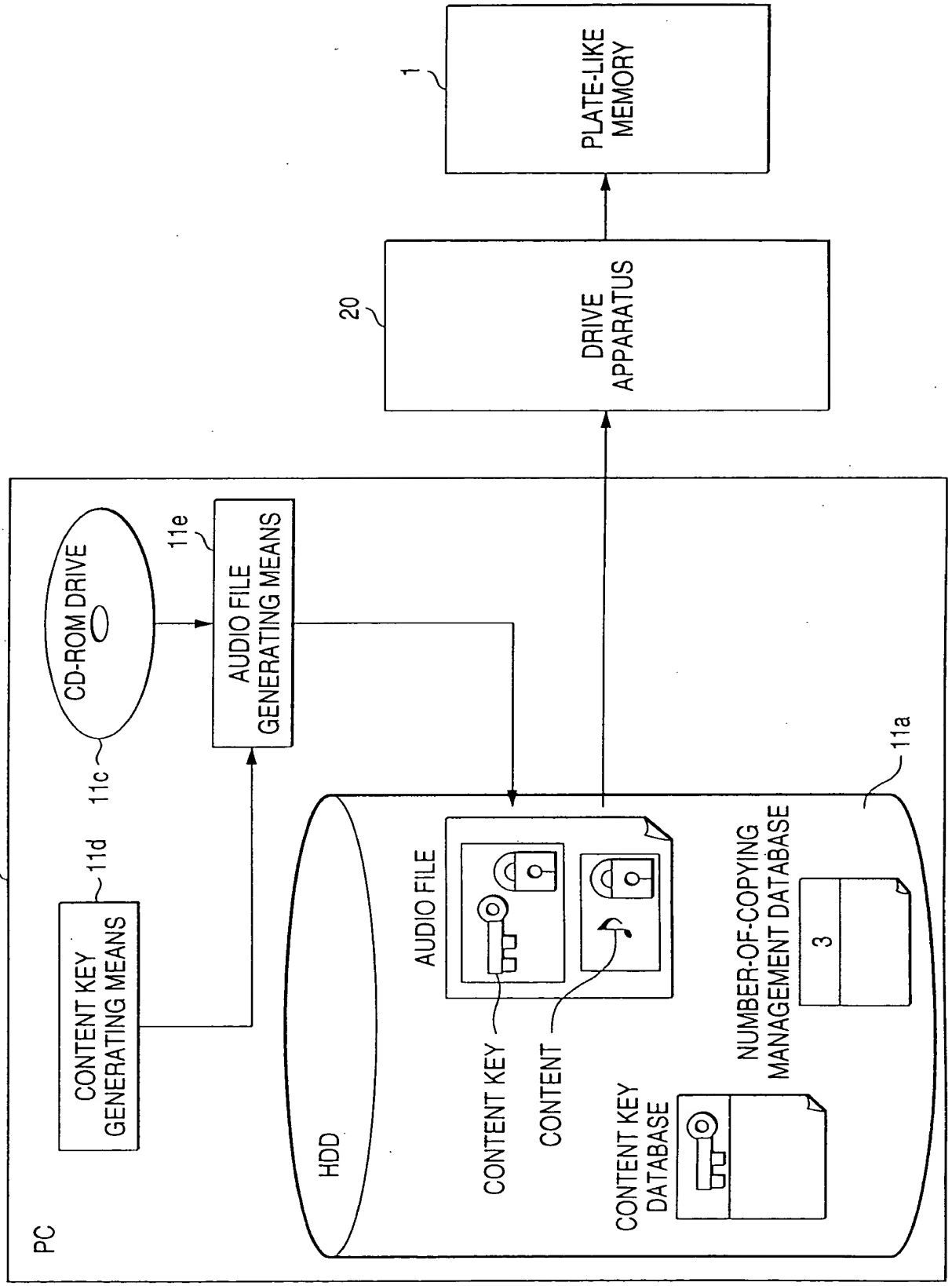


PLATE-LIKE MEMORY
1
DRIVE APPARATUS
20
PC
11
CD-ROM DRIVE
11c
AUDIO FILE GENERATING MEANS
11e
CONTENT KEY GENERATING MEANS
11d
HDD
11a
AUDIO FILE
CONTENT KEY
CONTENT
CONTENT KEY DATABASE
NUMBER-OF-COPYING MANAGEMENT DATABASE
3

FIG. 14

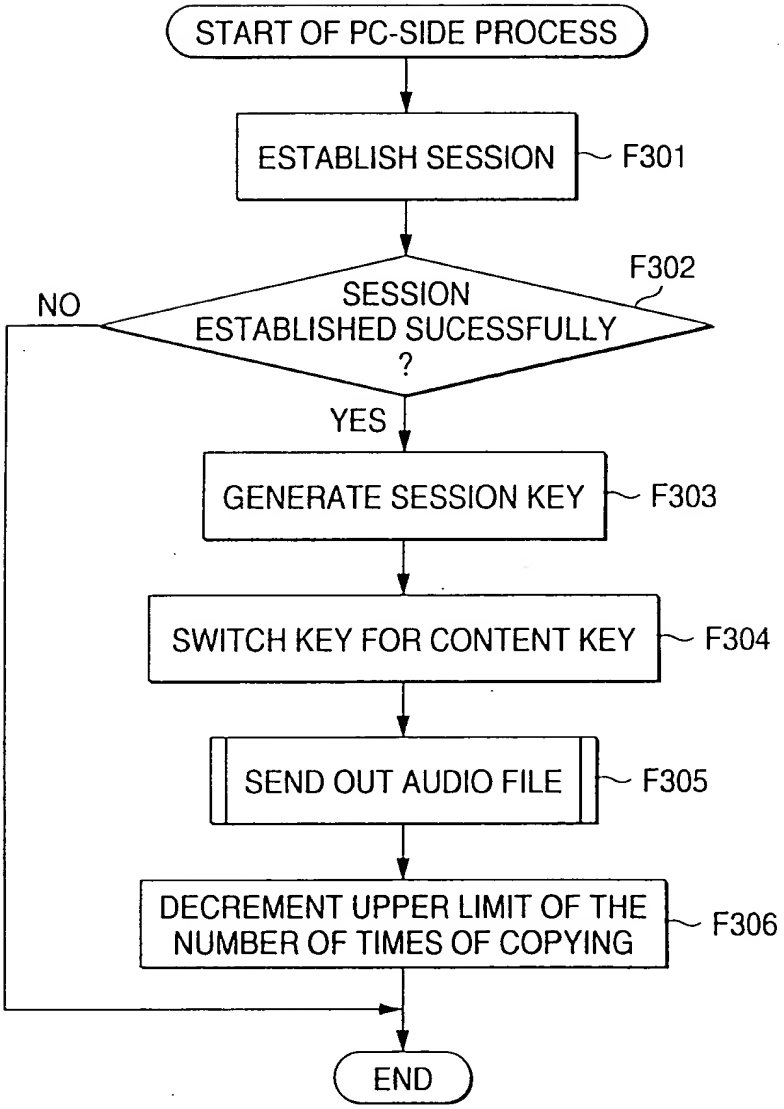

START OF PC-SIDE PROCESS
ESTABLISH SESSION
F301
SESSION ESTABLISHED SUCESSFULLY ?
F302
NO
YES
GENERATE SESSION KEY
F303
SWITCH KEY FOR CONTENT KEY
F304
SEND OUT AUDIO FILE
F305
DECREMENT UPPER LIMIT OF THE NUMBER OF TIMES OF COPYING
F306
END

FIG. 15

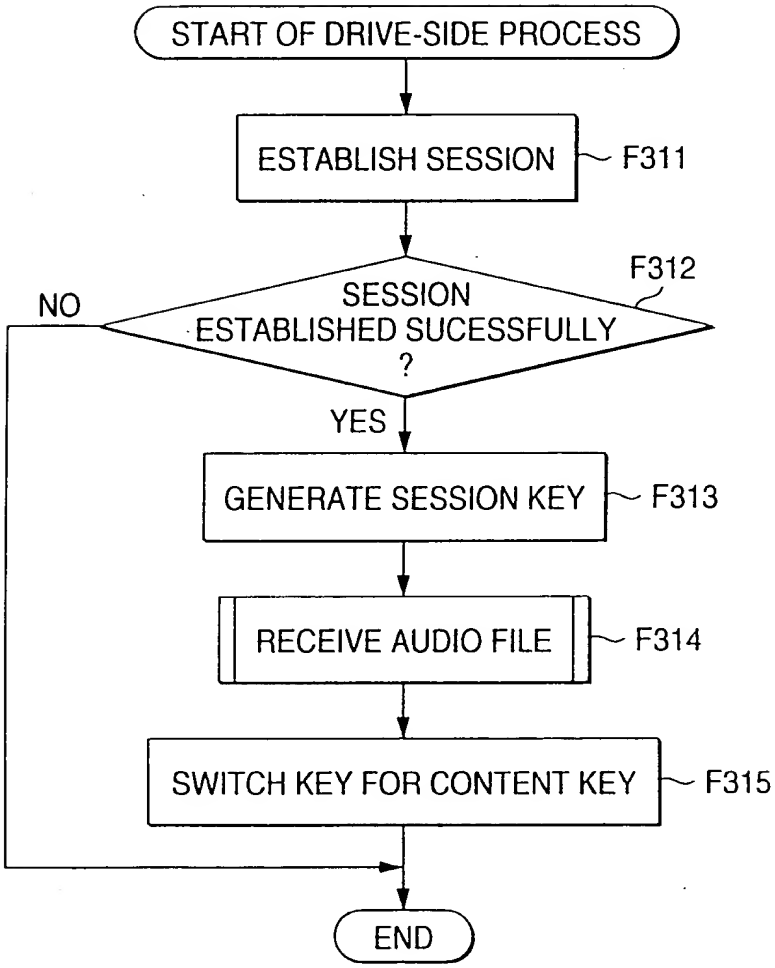

START OF DRIVE-SIDE PROCESS
ESTABLISH SESSION
F311
F312
SESSION ESTABLISHED SUCESSFULLY ?
NO
YES
GENERATE SESSION KEY
F313
RECEIVE AUDIO FILE
F314
SWITCH KEY FOR CONTENT KEY
F315
END

FIG. 16

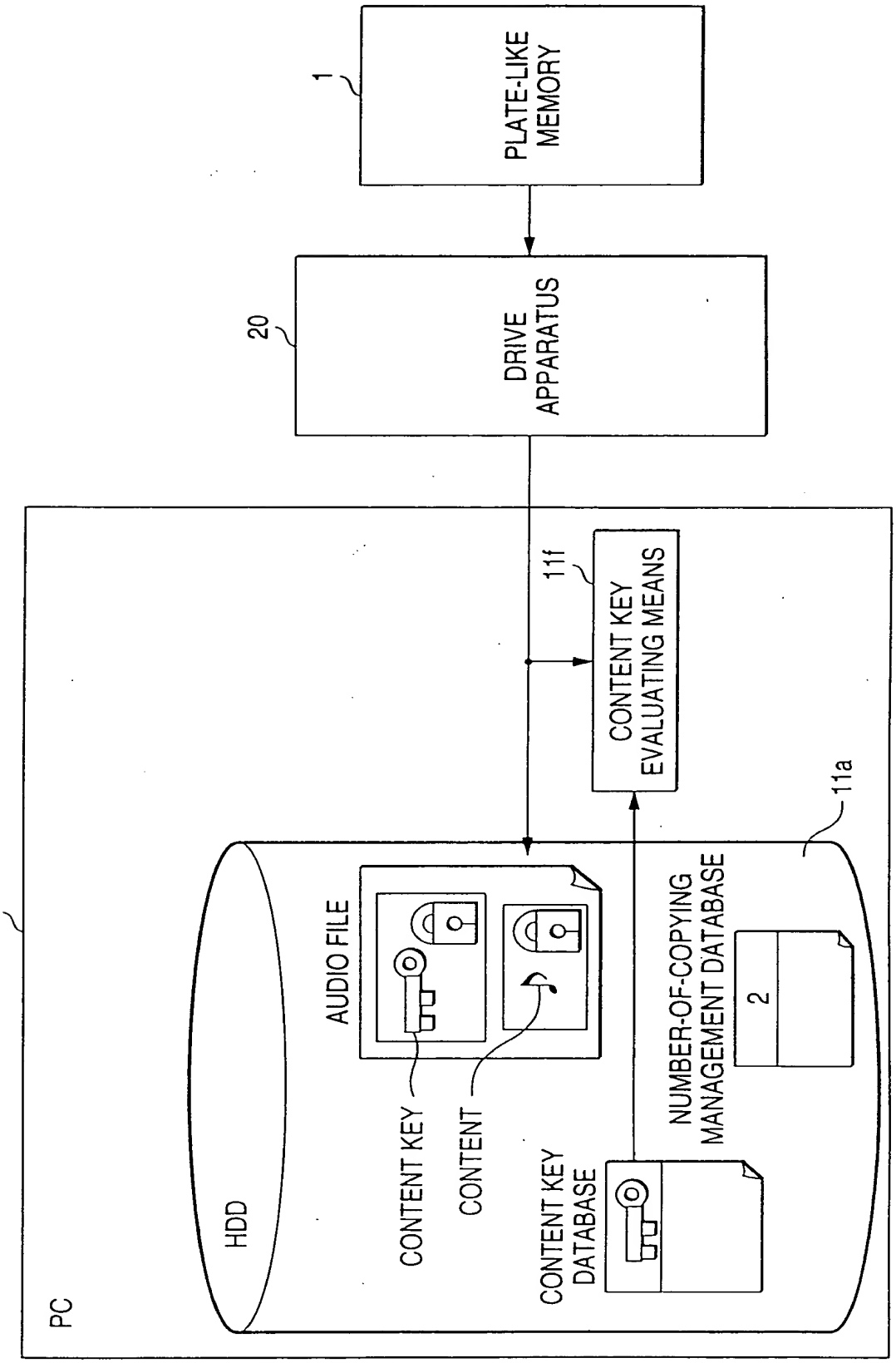

1
PLATE-LIKE MEMORY
20
DRIVE APPARATUS
11
PC
11f
CONTENT KEY EVALUATING MEANS
11a
HDD
AUDIO FILE
CONTENT KEY
CONTENT
CONTENT KEY DATABASE
NUMBER-OF-COPYING MANAGEMENT DATABASE
2

FIG. 17

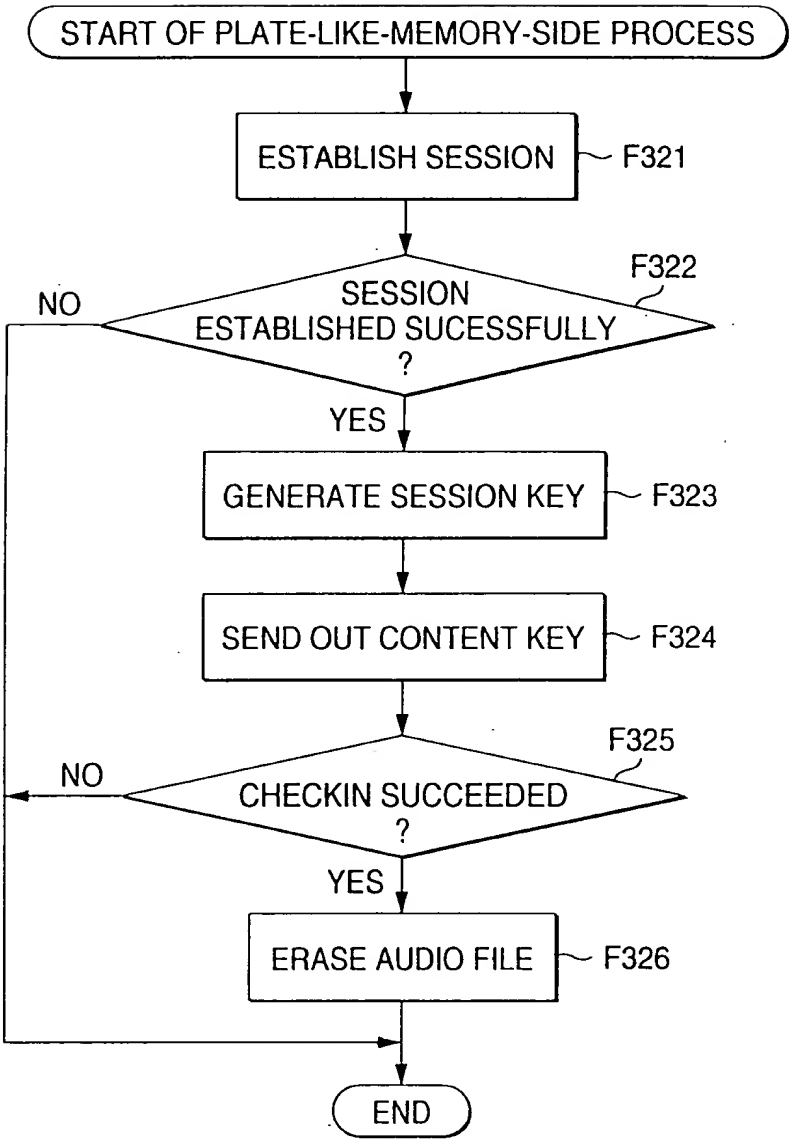

START OF PLATE-LIKE-MEMORY-SIDE PROCESS
ESTABLISH SESSION
F321
SESSION ESTABLISHED SUCESSFULLY ?
F322
NO
YES
GENERATE SESSION KEY
F323
SEND OUT CONTENT KEY
F324
CHECKIN SUCCEEDED ?
F325
NO
YES
ERASE AUDIO FILE
F326
END

FIG. 18

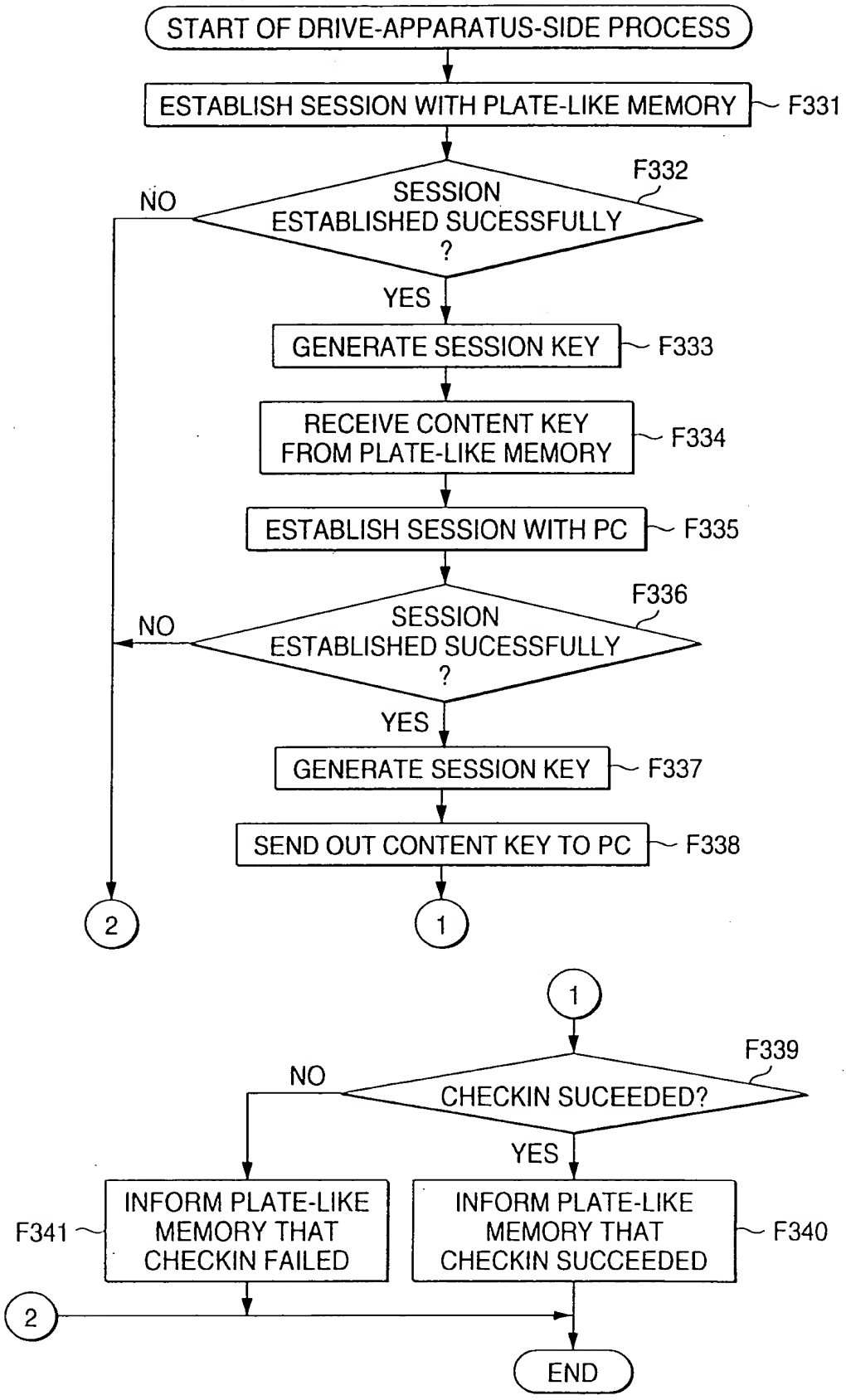
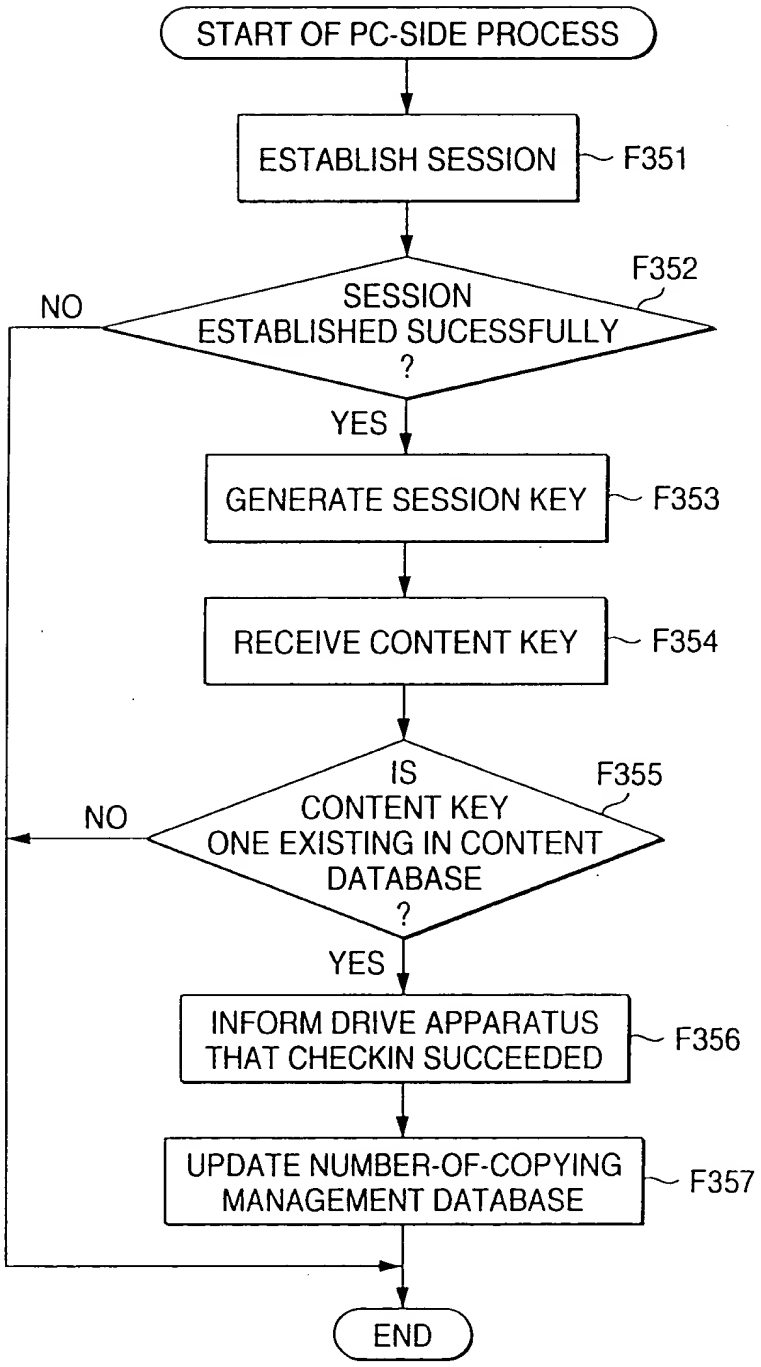

START OF DRIVE-APPARATUS-SIDE PROCESS
ESTABLISH SESSION WITH PLATE-LIKE MEMORY
F331
SESSION ESTABLISHED SUCESSFULLY ?
F332
NO
YES
GENERATE SESSION KEY
F333
RECEIVE CONTENT KEY FROM PLATE-LIKE MEMORY
F334
ESTABLISH SESSION WITH PC
F335
SESSION ESTABLISHED SUCESSFULLY ?
F336
NO
YES
GENERATE SESSION KEY
F337
SEND OUT CONTENT KEY TO PC
F338
2
1
1
CHECKIN SUCEEDED?
F339
NO
YES
INFORM PLATE-LIKE MEMORY THAT CHECKIN FAILED
F341
INFORM PLATE-LIKE MEMORY THAT CHECKIN SUCCEEDED
F340
2
END

FIG. 19


START OF PC-SIDE PROCESS
ESTABLISH SESSION
F351
SESSION ESTABLISHED SUCESSFULLY ?
F352
NO
YES
GENERATE SESSION KEY
F353
RECEIVE CONTENT KEY
F354
IS CONTENT KEY ONE EXISTING IN CONTENT DATABASE ?
F355
NO
YES
INFORM DRIVE APPARATUS THAT CHECKIN SUCCEEDED
F356
UPDATE NUMBER-OF-COPYING MANAGEMENT DATABASE
F357
END